

REMARKS

I. Introduction

Claims 8 to 21 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Rejection of Claims 8 to 21 Under 35 U.S.C. § 103(a)

Claims 8 to 21 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of DE 198 38 466 ("Lenfers et al.") and U.S. Patent No. 3,949,551 ("Eichler et al."). It is respectfully submitted that the combination of Lenfers et al. and Eichler et al. do not render unpatentable the present claims for at least the following reasons.

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied.

First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). As clearly indicated by the Supreme Court, it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). As explained herein, the Final Office Action does satisfy these requirements of § 103 as to all of the features of the claims.

Claim 8 relates to a method for operating a broadband lambda sensor for determining an oxygen concentration in the exhaust gas of an internal combustion engine operated with a fuel-air mixture. Claim 8 has been amended to delete the alternative “during a warm-up phase of the lambda sensor,” and to change the term “secondary fuel injection” to “post fuel injection” to better clarify the invention. Accordingly, claim 8 now recites, *inter alia*, that the method includes, repeatedly reversing the polarity of the pump voltage during at least the lean operation to create a temporary reversal of direction of the pump current, wherein the repeated reversal of polarity of the pump voltage is carried out during the duration of a post fuel injection in the lean operation of the internal combustion engine.

The combination of Lenfers et al. and Eichler et al. does not disclose or suggest these features. The Examiner admits, on page 3 of the Final Office Action, that Lenfers et al. “fails to teach the engine to be in lean operation during the warm-up phase or *during the duration of a secondary fuel injection*” (*emphasis added*). Instead, the Examiner cites Eichler et al. as allegedly disclosing the feature of “the engine and in turn the sensor to be in the lean phase during warm up.” While it may be the case that Eichler et al. disclose the engine and sensor are in the *lean phase during warm up* (which Applicants do not concede), nowhere do Eichler et al. disclose that the repeated reversal of polarity of the pump voltage is carried out during the duration of a **post fuel injection** in the lean operation of the internal combustion engine.

That is, Lenfers et al. and Eichler et al. focus exclusively on lean operation of the internal combustion engine and do not disclose, or suggest, providing the clocked pump current polarity reversal in post injections, which ultimately no longer corresponds to a lean operation from the temporal point of view. Furthermore, since the LSU possibly regenerates automatically in the cited references due to the changed mixture in the cavity, the polarity-reversal measure would not even be required in post injections.

For all of the foregoing reasons, the combination of Lenfers et al. and Eichler et al. does not disclose or suggest all of the features of amended claim 8. As for claims 9 to 21, which ultimately depend from claim 8 and therefore include all of the features included in claim 8, it is respectfully submitted that the combination of Lenfers et al. and Eichler et al. does not render unpatentable these dependent

claims for at least the reasons more fully set forth above in support of the patentability of claim 8.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

III. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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